

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Jean-Rene ROUSSEAU, et al.

Continuation In Part Application of  
U.S. Appln. No.: 09/427,179

Group Art Unit: 2681 (Parent)

Confirmation No.: Unknown

Examiner: J. Contee (Parent)

Filed: June 28, 2001

For: CELLULAR MOBILE TELEPHONE SYSTEM USABLE ON BOARD A PASSENGER  
TRANSPORT VEHICLE

**PRELIMINARY AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to examination, please amend the above-identified application as follows:

**IN THE SPECIFICATION:**

**Page 2, before the first line, insert the following text:**

This is a Continuation-in-Part of Application No. 09/427,179 filed October 26, 1999.

**Page 5, after the 8<sup>th</sup> full paragraph and after line 26, insert the following text:**

As in a classical ground level GSM base station subsystem, the onboard base station subsystem BSS1 comprises means for transferring the charging data to the terrestrial mobile telephone network. In particular, it uses the standardized A interface. But the transfer is made via the bidirectional radio link comprising the transmitter-receiver station T2, the satellite S, and

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the transmitter-receiver station T1. The onboard base station subsystem BSS1 is thus built in conformance with the following IU-T standards:

GSM 08.01 (ETS 300 586-1): "Digital cellular telecommunication system (Phase 2); Base Station System - Mobile services Switching Centre (BSS -MSC) interface General aspects".

GSM 08.02 (ETS 300 586-2): "Digital cellular telecommunication system (Phase 2); Base Station System - Mobile-services Switching Centre (BSS -MSC) interface Interface principles".

GSM 08.04 (ETS 300 588): "Digital cellular telecommunication system (Phase 1); Base Station System - Mobile-services Switching Centre (BSS - MSC) interface Layer 1 specification".

GSM 08.06 (ETS 300 589): "Digital cellular telecommunication system (Phase 2); Signalling transport mechanism specification for the Base Station System - Mobile-services Switching Centre (BSS - MSC) interface".

GSM 08.08 (ETS 300 590): "Digital cellular telecommunication system (Phase 2); Mobile Switching Centre - Base Station System (MSC - BSS) interface Layer 3 specification".

GSM 08.20 (ETS 300 591): "Digital cellular telecommunication system (Phase 2); Rate adaption on the Base Station System - Mobile-services Switching Centre (BSS - MSC) interface".

GSM 08.51 (ETS 300 592): "Digital cellular telecommunication system (Phase 2); Base Station Controller - Base Transceiver Station (BSC - BTS) interface General aspects".

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GSM 08.52 (ETS 300 593): "Digital cellular telecommunication system (Phase 2); Base Station Controller - Base Transceiver Station (BSC - BTS) interface Interface principles".

GSM 08.54 (ETS 300 594): "Digital cellular telecommunication system (Phase 2); Base Station Controller - Base Transceiver Station (BSC - BTS) interface Layer 1 structure of physical circuits".

GSM 08.56 (ETS 300 595): "Digital cellular telecommunication system (Phase 2); Base Station Controller - Base Transceiver Station (BSC - BTS) interface Layer 2 specification".

GSM 08.58 (ETS 300 596): "Digital cellular telecommunication system (Phase 2); Base Station Controller - Base Transceiver Station (BSC - BTS) interface Layer 3 specification".

The construction of an onboard base station subsystem BSS 1 conforming with these standards is within the reach of a Man skilled in the Art.

**IN THE CLAIMS:**

**Please enter the following amended claims:**

1. (Amended) A cellular mobile telephone system usable on board a passenger transport vehicle, the system including:

- a first transmitter-receiver station on board said vehicle and connected to an antenna external to said vehicle to establish an external radio link between said vehicle and a terrestrial mobile telephone network, and

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- means in said vehicle for coupling portable mobile telephone terminals inside said vehicle to said transmitter-receiver station, said means including at least one base station system having at least one antenna inside said vehicle and a base station controller connected to each base station system and to said first transmitter-receiver station, said controller and said base station system having functions analogous to those of a base station system in a standard mobile telephone network, wherein said base station controller comprises means for transferring charging data to the terrestrial mobile telephone network via the external radio link.

**REMARKS**

Entry and consideration of this Amendment is respectfully requested. Upon entry of this Amendment, claims 1-4 are pending in the application. It is respectfully submitted that the Preliminary Amendment places the above-identified application in even better condition for further examination.

By this Amendment, Applicant has amended independent claim 1 to recite that the base station controller comprises means for transferring charging data to the terrestrial mobile telephone network via the external radio link. Further, Applicant has amended the specification to expressly discuss the feature of the present invention.

In the Office Action dated March 28, 2000 in parent application 09/427,179, claims 1-3 were rejected under 35 U.S.C. § 102(b) as being anticipated by Palmgren et al. (WO 94/28684). Applicant respectfully submits that amended independent claim 1 would not have been anticipated by or rendered obvious in view of the cited reference.

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The present invention is directed to a cellular mobile telephone system for a passenger transport vehicle (e.g., an airplane, train or ship). As shown in the Figure, the system includes a base station system BSS1 located within an aircraft AV, wherein the base station system BSS1 is analogous to a GSM base station system used in a terrestrial GSM network. The base station system BSS1 includes an antenna AN2 located inside of the aircraft for communicating with GSM portable terminals TL1 and TL2. A transmitter-receiver station T2 is provided on board the aircraft and connected to the base station system BSS1 and an external antenna AN1 to establish an external radio link between the aircraft and a terrestrial mobile telephone network R1 via a satellite S. The onboard base station system BSS1 further includes a base station controller BSC1 and a base transceiver station BTS1 connected to the antenna AN2. The base station system and the base station controller have functions analogous to those of a base station system in a standard mobile telephone network. The onboard base station subsystem BSS1 comprises means for transferring the charging data to the terrestrial mobile telephone network.

Palmgren et al. (Palmgren) discloses a mobile communication system for use on an airplane or ship. As shown in Figure 1, the system 8 includes a small GSM network 11 which has a single base station BTS. Connecting means 12 connect mobile stations MS to the network 11. Switching means (MSC, BSC, BTS) are provided to identify the mobile stations MS connected to the network 11, connect calls to and from the mobile stations MS, and record the services employed through the mobile stations MS. The system (8) further includes a transmitter-receiver means TFTS for wireless and external signal transmission between the network 11 on board and terrestrial network 1.

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Applicant respectfully submits that it is quite clear that Palmgren does teach or suggest onboard base station subsystem BSS1 comprises means for transferring the charging data to the terrestrial mobile telephone network. That is, Palmgren (page 10) teaches that this function is not fulfilled by means on board the aircraft (the charging data are not transferred via an external radio link) but rather that the charging data are transferred via a floppy disc 16, after landing. Accordingly, Applicant respectfully submits that independent claim 1 as well as dependent claims 2-4, should be allowable because the applied reference do not teach or suggest all of the features of the claims.

If any points remain in issue which the examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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Date: June 28, 2001

Attorney Docket No.: Q65197

**APPENDIX**

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION:**

**The specification is changed as follows:**

**Page 2, before the first line, the following text was inserted:**

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**Page 5, after the 8<sup>th</sup> full paragraph and after line 26, the following text was inserted:**

As in a classical ground level GSM base station subsystem, the onboard base station subsystem BSS1 comprises means for transferring the charging data to the terrestrial mobile telephone network. In particular, it uses the standardized A interface. But the transfer is made via the bidirectional radio link comprising the transmitter-receiver station T2, the satellite S, and the transmitter-receiver station T1. The onboard base station subsystem BSS1 is thus built in conformance with the following IU-T standards:

GSM 08.01 (ETS 300 586-1): "Digital cellular telecommunication system (Phase 2); Base Station System - Mobile services Switching Centre (BSS -MSC) interface General aspects".

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The construction of an onboard base station subsystem BSS 1 conforming with these standards is within the reach of a Man skilled in the Art.

**IN THE CLAIMS:**

**The claims are amended as follows:**

1. (Amended) A cellular mobile telephone system usable on board a passenger transport vehicle, the system including:

- a first transmitter-receiver station on board said vehicle and connected to an antenna external to said vehicle to establish an external radio link between said vehicle and a terrestrial mobile telephone network, and

- means in said vehicle for coupling portable mobile telephone terminals inside said vehicle to said transmitter-receiver station, said means including at least one base station system having at least one antenna inside said vehicle and a base station controller connected to each base station system and to said first transmitter-receiver station, said controller and said base station system having functions analogous to those of a base station system in a standard mobile

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telephone network, wherein said base station controller comprises means for transferring  
charging data to the terrestrial mobile telephone network via the external radio link.